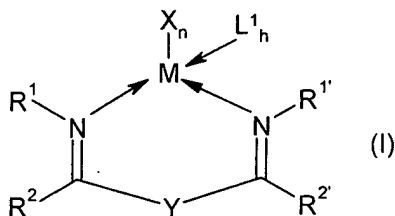


## ATTACHMENT A

1. (Original) A catalyst system for preparing homopolymers or copolymers of olefins, which is obtainable by reacting at least one transition metal compound with at least one cocatalyst which is able to convert the transition metal compound into a species which displays polymerization activity toward at least one olefin, wherein the transition metal compound has the formula (I),



where

M is an element of group 3, 4, 5, 6, 7, 8, 9 or 10 of the Periodic Table of the Elements or the lanthanides,

X are identical or different and are each an organic or inorganic anionic monovalent ligand, where two radicals X may also be joined to form a divalent radical,

n is 1, 2, 3 or 4,

L<sup>1</sup> is an organic or inorganic uncharged ligand,

h is an integer from 0 to 4,

R<sup>1</sup> and R<sup>1'</sup> can be identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

R<sup>2</sup> and R<sup>2'</sup> can be identical or different and are each a substituted or unsubstituted C<sub>6</sub>-C<sub>40</sub>-aryl radical or C<sub>2</sub>-C<sub>40</sub>-heteroaromatic radical containing at least one

heteroatom selected from the group consisting of O,  
N, S or P,

and

Y is a divalent group between the two  $sp^2$ -hybridized carbon atoms and is selected from the group consisting of the two-membered bridges  $-N(R^3)-N(R^4)-$  and  $-O-N(R^5)-$  and the one-membered bridges  $-O-$ ,  $-N(R^6)-$ ,  $-N(OR^7)-$  and  $-N(NR^8R^9)-$ ,

where

$R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms, where two adjacent radicals may also form a divalent organic group having from 1 to 40 carbon atoms which together with the atom or atoms connecting its ends forms a heterocyclic ring system.

2. (Original) A catalyst system as claimed in claim 1, wherein the transition metal compound has a formula (I) in which

M is Ni or Pd,

X is halogen,

N is 2,

h is 0,

$R^1$  and  $R^{1'}$  are identical and are each a substituted or unsubstituted  $C_6$ - $C_{40}$ -aryl radical or a nitrogen-containing heteroaromatic radical having from 4 to 20 carbon atoms, and

the other variables are as defined for the formula (I).

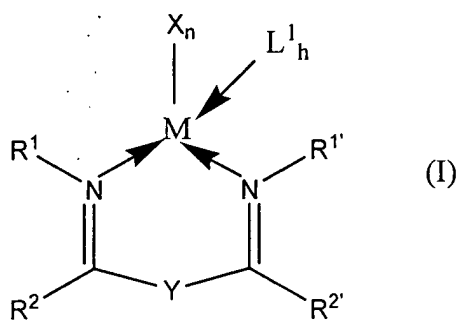
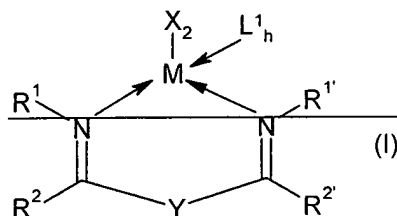
3. (Previously presented) A catalyst system as claimed in claim 1, wherein the cocatalyst is an aluminoxane.

4. (Previously presented) A catalyst system as claimed in claim 1 which further comprises a support.

5. (Canceled)

6. (Previously presented) A process for preparing polyolefins by polymerization or copolymerization of at least one olefin in the presence of a catalyst system as claimed in claim 1.

7. (Currently amended) A transition metal compound of the formula (I)



where

M is an element of group 3, 4, 5, 6, 7, 8, 9 or 10 of the Periodic Table of the Elements or the lanthanides,  
X are identical or different and are each an organic or inorganic anionic monovalent ligand, where two

radicals X may also be joined to form a divalent radical,

n is 1, 2, 3 or 4,

L<sup>1</sup> is an organic or inorganic uncharged ligand,

h is an integer from 0 to 4,

R<sup>1</sup> and R<sup>1'</sup> can be identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

R<sup>2</sup> and R<sup>2'</sup> can be identical or different and are each a substituted or unsubstituted C<sub>6</sub>-C<sub>40</sub>-aryl radical or C<sub>2</sub>-C<sub>40</sub>-heteroaromatic radical containing at least one heteroatom selected from the group consisting of O, N, S or P,

and

Y is a divalent group between the two sp<sup>2</sup>-hybridized carbon atoms and is selected from the group consisting of the two-membered bridges -N(R<sup>3</sup>)-N(R<sup>4</sup>)- and -O-N(R<sup>5</sup>)- and the one-membered bridges -O-, -N(R<sup>6</sup>)-, -N(OR<sup>7</sup>)- and -N(NR<sup>8</sup>R<sup>9</sup>)-,

where

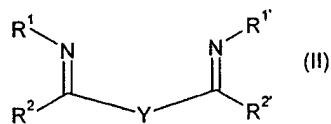
R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms, where two adjacent radicals may also form a divalent organic group having from 1 to 40 carbon atoms which together with the atom or atoms connecting its ends forms a heterocyclic ring system.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Previously presented) A ligand system of the formula (II)



for preparing a transition metal compound,

where

$\text{R}^1$  and  $\text{R}^{1'}$  can be identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

$\text{R}^2$  and  $\text{R}^{2'}$  can be identical or different and are each a substituted or unsubstituted  $\text{C}_6$ - $\text{C}_{40}$ -aryl radical or  $\text{C}_2$ - $\text{C}_{40}$ -heteroaromatic radical containing at least one heteroatom selected from the group consisting of O, N, S or P,

and

Y is a divalent group between the two  $\text{sp}^2$ -hybridized carbon atoms and is selected from the group consisting of the two-membered bridges  $-\text{N}(\text{R}^3)-\text{N}(\text{R}^4)-$  and  $-\text{O}-\text{N}(\text{R}^5)-$  and the one-membered bridges  $-\text{O}-$ ,  $-\text{N}(\text{R}^6)-$ ,  $-\text{N}(\text{OR}^7)-$  and  $-\text{N}(\text{NR}^8\text{R}^9)-$ ,

where

$\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$ ,  $\text{R}^7$ ,  $\text{R}^8$  and  $\text{R}^9$  are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms, where two adjacent radicals may also form a divalent organic group having from 1 to 40 carbon atoms which together with the atom or atoms connecting its ends forms a heterocyclic ring system.

12. (Previously presented) A ligand system of the formula (II) as claimed in claim 11, wherein

Y is  $-N(R^3)-N(R^4)-$  or  $-O-N(R^5)-$ .

13. (Previously presented) A ligand system of the formula (II) as claimed in claim 12, wherein the variables

$R^1$  and  $R^{1'}$  are identical and are each a substituted or unsubstituted  $C_6-C_{40}$ -aryl radical or a nitrogen-containing heteroaromatic radical having from 4 to 20 carbon atoms.

14. (Previously presented) A process for preparing a transition metal compound, which comprises reacting a ligand system as claimed in claim 11 with a transition metal compound.

15. (Previously presented) A catalyst system as claimed in claim 2, wherein the cocatalyst is an aluminoxane and said catalyst system further comprises a support.

16. (Previously presented) A process for preparing the catalyst system of claim 1 comprising reacting at least one transition metal compound with at least one cocatalyst which is able to convert the transition metal compound into a species which displays polymerization activity toward at least one olefin, wherein the transition metal compound has the formula (I).